

REMARKS:

Applicant has carefully studied the nonfinal Examiner's Action and all references cited therein. The amendment appearing above and these explanatory remarks are believed to be fully responsive to the Action. Accordingly, this important patent application is now believed to be in condition for allowance.

Applicant responds to the outstanding Action by centered headings that correspond to the centered headings employed by the Office, to ensure full response on the merits to each finding of the Office.

Election/Restrictions

Claims 1-9 were previously withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a non-elected Group. Non-elected claims 1-9 have been cancelled in the present amendment to expedite prosecution.

Drawings

The Examiner has objected to Figures 1-2, requesting that they be clearly identified as Prior Art. Proposed drawing corrections and substitution sheets for Figures 1 and 2 are included with this amendment.

Claim Rejections – 35 U.S.C. § 112

Applicant acknowledges the quotation of 35 U.S.C § 112, second paragraph.

Claims 10-16 stand rejected under 35 U.S.C § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More specifically, independent claim 10 stands rejected as being vague and indefinite for the use of the term "insert" because it is not clear what is encompassed by this term, additionally the definition offered by the disclosure has been determined to be insufficient to limit the instant claims. Claim 13 recites "self-curing and curable agents" was has been determined by the Office to be vague and indefinite. Claim 14 recites that fusion takes place

prior to the cells being introduced into the chamber, which has been determined by the Office to lack clear antecedent basis.

Claims 10-16 have been amended to overcome the 35 U.S.C § 112, second paragraph rejections.

Claim Rejections – 35 U.S.C. § 102

Applicant acknowledges the quotation of 35 U.S.C § 102(b) and (e).

Claims 10-16 stand rejected under 35 U.S.C § 103(a) as being anticipated by Jaroszeski et al. (1994, Biophys. J), Stelkrech et al. (DE 3505147) or Jaroszeski et al. (WO 996481).

Claim 10, as currently amended, recites an apparatus for producing cell fusion, comprising an insert for holding a fluid medium containing cells to be fused, the insert further comprising a substrate and a cuvette dimensioned to contain the insert, means for inducing migration of cells in said insert toward one side of said substrate, and means for inducing fusion of at least a portion of the cells on the one side of the substrate. Jaroszeski et al. (1994, Biophys. J.) does not describe an apparatus comprising an insert and a cuvette having means for inducing migration of cells in said insert toward one side of said substrate as claimed by the present invention. By contrast, the chamber described by Jaroszeski, as shown in Fig. 6, includes two substrates wherein the cells are induced to migrate to either of the two substrates and the two electrodes are positioned such that fusion is induced between the two substrates. As such, Jaroszeski does not describe the apparatus of the present invention as disclosed and claimed.

While the Office has not cited a specific figure or text reference for Jaroszeski et al. (WO 996481), Applicant contends that Jaroszeski et al. (WO 996481) does not describe an apparatus having an insert further comprising a substrate and a cuvette dimensioned to contain the insert as disclosed and claimed by the present invention. As such, Jaroszeski does not describe the apparatus of the present invention as disclosed and claimed.

The Office contends that Stelkrech et al. (DE 3,505,147) describes a “cuvette” chamber containing inserts, wherein the inserts have electrodes, membranes and porous support backings, a vacuum means for holding cells on the support, electrofusion medium during the process, and

electromagnetic means for effecting fusion. Referring to Fig. 1 of Stelkrech, the chamber shown by Stelkrech includes two substrate surfaces 70 and 68. It would follow that the two vacuum systems shown, 64 and 68, provide a means to migrate the cells to either of the two substrates and the two electrodes are positioned such that fusion is induced between the two substrates. Additionally, Applicant is in possession of the English translation of the Stelkrech patent, which states:

In order to create a method for the electrofusion of cells in which the cells are fused while in membrane contact and using a suitable magnetic field, in which the directed fusion of two cells is possible in a simple manner, it is proposed that the cells be fixed on a first and a second carrier, that the two carriers be so arranged that the cells that are fixed on them are opposite each other, that the cells be moved toward each other forming basically pairs of cells that comprise one cell from the first carrier and one cell from the second carrier, and that the cells in these pairs then be fused.

Stelkrech does not illustrate in the figures or described in the translated specification an insert further comprising a substrate and a cuvette dimensioned to contain the insert, means for inducing migration of cells in said insert toward one side of said substrate, and means for inducing fusion of at least a portion of the cells on the one side of the substrate. As such, the apparatus as shown and described by Stelkrech does not anticipate the apparatus of the present invention as disclosed and claimed.

Claim 10-16 stand rejected under 35 U.S.C. 102(e) as being anticipated by Jaroszeski et al. (U.S. 6,221,665) or Jaroszeski et al. (U.S. 6,355,485). The Office states that Jaroszeski et al. (WO 9964581), Jaroszeski et al. (U.S. 6,221,665) and Jaroszeski et al. (U.S. 6,355,485) all have the same disclosure of an electrofusion chamber having a substrate, a fluid medium therein, a means for inducing migration of cells in said chamber and means for inducing fusion of at least a portion of the cells. The Office considers the electrodes to be inserts giving the limitation "insert" its broadest reasonable interpretation to mean anything inserted inside a cuvette.

In view of the amendment to the claims, Applicant believes that the current claims are not anticipated by Jaroszeski et al. (WO 9964581), Jaroszeski et al. (U.S. 6,221,665) or Jaroszeski et al. (U.S. 6,355,485). The claims presented positively recite an insert for holding a fluid medium containing cells to be fused, the insert further comprising a substrate and a cuvette dimensioned

to contain the insert, means for inducing migration of cells in said insert toward one side of said substrate, and means for inducing fusion of at least a portion of the cells on the one side of the substrate. These limitations are not present in the references cited.

For the reasons cited above, Applicant believes that amended independent claim 10 is not anticipated by Jaroszeski et al. (WO 9964581), Jaroszeski et al. (U.S. 6,221,665), Jaroszeski et al. (U.S. 6,355,485) or Stelkrecht et al. (DE 3,505,147) and is believed to be in condition for allowance.

Claims 11-17 are dependent upon claim 10, and are therefore allowable as a matter of law.

If the Office is not fully persuaded as to the merits of Applicant's position, or if an Examiner's Amendment would place the pending claims in condition for allowance, a telephone call to the undersigned at (727) 507-8558 is requested.

Very respectfully,

SMITH & HOPEN

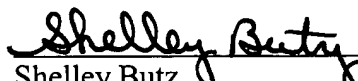
Dated: May 20, 2004

By: 
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Attorneys for Applicant

CERTIFICATE OF MAILING
(37 C.F.R. 1.8)

I HEREBY CERTIFY that this Amendment A is being deposited with the United States Postal Service by first class mail in an envelope addressed to: Mail Stop Non-Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on May 20, 2004.

Dated: May 20, 2004


Shelley Butz



Prior Art

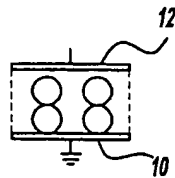


Figure - 1A

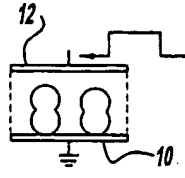


Figure - 1B

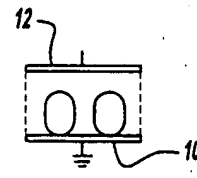


Figure - 1C

Prior Art

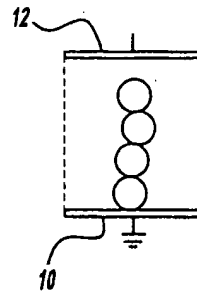


Figure - 2

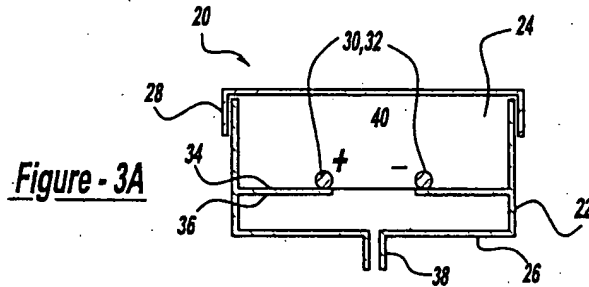


Figure - 3A

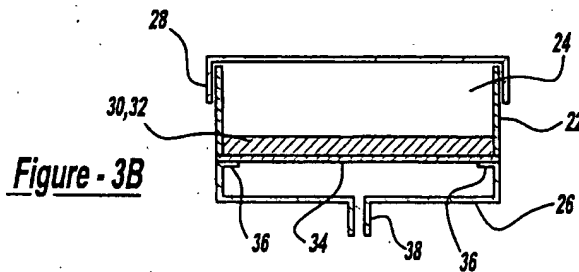


Figure - 3B